Alberta

FORESTRY, LANDS and WILDLIFE

Annual Report 1985-86

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FORESTRY, LANDS and WILDLIFE

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Office of the Minister

March 27, 1986

The Honorable Helen Hunley
Lieutenant Governor of the Province of Alberta

Your Honor:

I have the honor to submit the Annual Report of the Department of Forestry, Lands and Wildlife for the fiscal year ended March 31, 1986.

Respectfully submitted,

D. H. Sparrow

Don Sparrow
Minister of Forestry,
Lands and Wildlife

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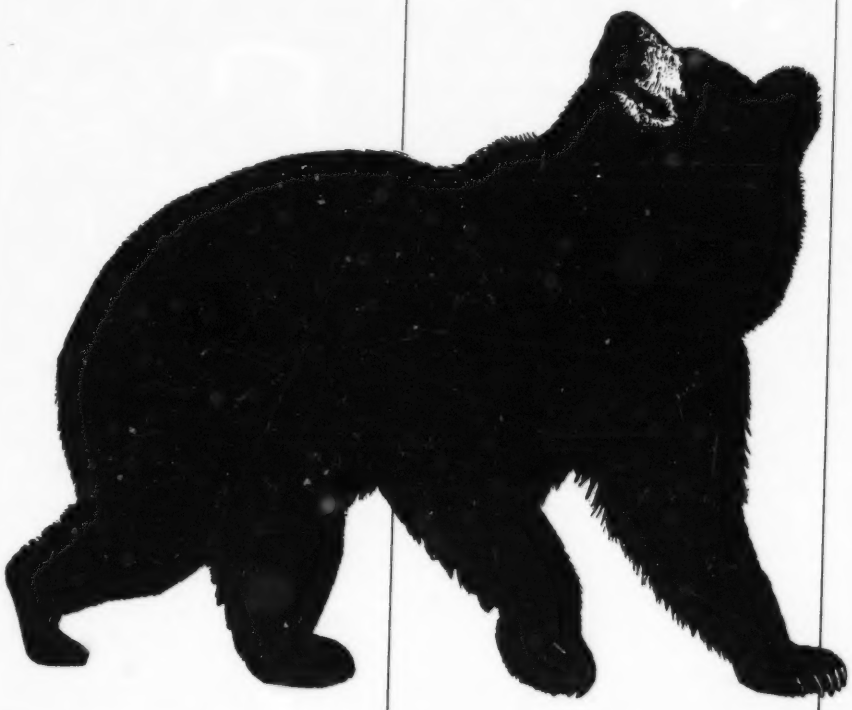


Minister's Message

When the renewable resources sector was separated from Alberta Energy and Natural Resources early in 1986, the new department was initially called Alberta Forestry. Later, however, the name was expanded to Alberta Forestry, Lands and Wildlife, which more accurately reflects the department's main areas of concern in carrying out its mandate: to ensure the wise use of the province's natural resources for the maximum benefit of all Albertans.

The year 1985-86 has been a productive one, with significant achievements recorded in several areas. Although this has been a period of budgetary restraint, the department's dedicated staff has continued to provide a high level of service to the Alberta public, and I want to compliment them here for their fine work.

In forestry, a major step was taken toward developing one of the province's underused resources - the hardwood forests - when a Forest Management Agreement was awarded to Pelican Spruce Mills Ltd. For the first time in Alberta the agreement calls for harvesting hardwoods as well as the traditional softwoods. The agreement means further diversification of the economy and more jobs for Albertans.

Protecting environmentally sensitive areas is a high priority with the department and with this objective in mind five new forest land use zones were established to deal with conflicting recreational activites in certain areas in the Eastern Slopes. The zones allow outdoor enthusiasts to enjoy the scenic wilderness while protecting the areas for the future.

The highlight of the year in public lands was a policy change designed to make it easier to convert grazing lease lands to more productive agricultural uses. While the new policy eliminated the need to post notices about the leaseholder's intentions, no change was made in the criteria for deciding whether the land was suitable for conversion. One of the key benefits expected from the new approach is an increase in the amount of arable land under cultivation and thus a stronger agricultural industry.

Work continued through the year on developing integrated resource plans for the province's public lands and resources. Seven plans, covering more than 26 590 square kilometres, received approval from cabinet and another two were ready for review at year's end.

A major development in the fish and wildlife area was the preparation of draft regulations for the new Wildlife Act, which was passed in 1984. These regulations, providing opportunities for innovative wildlife programs, were reviewed in detail by the Fish and Wildlife Advisory Council. When the council's recommendations and other changes have been made, the draft regulations will be given a 60-day public review in order to obtain additional input. Public comments and suggestions have been sought regularly since the new Fish and Wildlife Policy for Alberta was formulated in 1982.

It was an outstanding year for habitat development, with more than 230 projects undertaken. In January the department announced the joint purchase of the 2 226-hectare Ward Ranch, near Brooks, in co-operation with Ducks Unlimited Canada, the Alberta Fish and Game Association and Wildlife Habitat Canada. This was the largest land acquisition ever made by the provincial government to obtain wildlife habitat. Meanwhile, work continued on developing a combined water management and wetlands habitat at Tyrrell-Rush lakes, southeast of Lethbridge. The waterfowl habitat work at this site is part of the Wetlands for Tomorrow program, a joint effort with Ducks Unlimited Canada that will see the improvement of 20 major wetlands in Alberta.

In these and numerous other undertakings such as Buck for Wildlife, Use Respect and Outdoor Observer, the department has received wholehearted co-operation and assistance from many organizations, clubs and individuals. It is this spirit of working together that helps us all achieve our goals and, on behalf of the department, I want to extend my thanks to these groups and individuals.

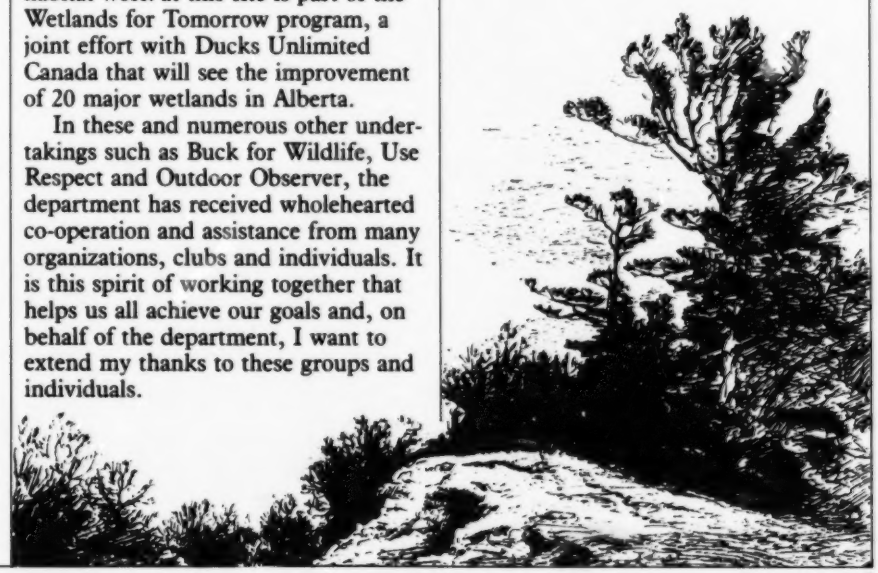
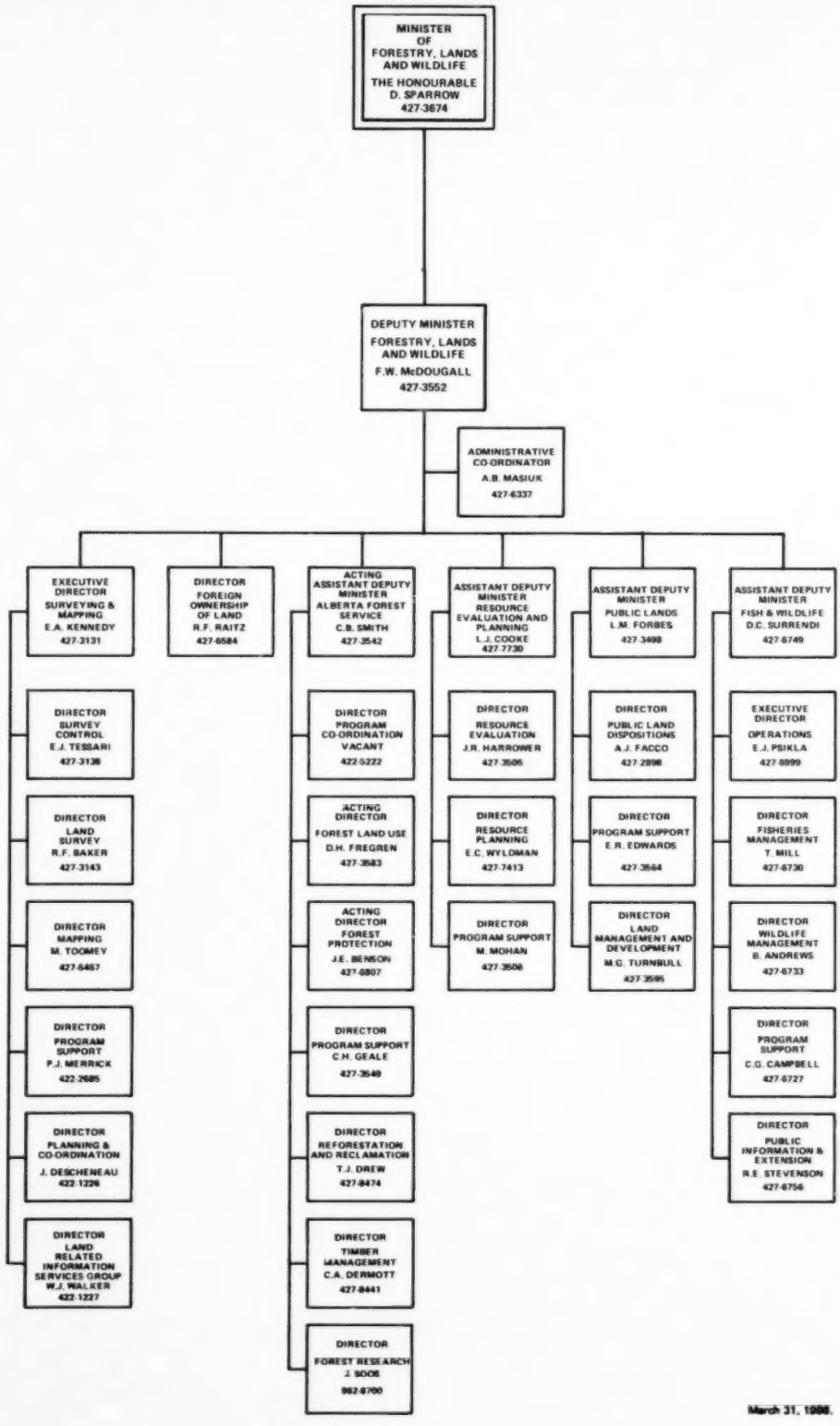


Figure 1 - Organization Chart



The Department

In 1986 Alberta Forestry, Lands and Wildlife was created as a separate department out of the renewable resources sector of Alberta Energy and Natural Resources.

The department is responsible for managing some of Alberta's most important renewable resources - forests, which cover half the province, other public lands and fish and wildlife. It also looks after land use planning and provides surveying, mapping and aerial photograph services to the government. In addition, it monitors purchase of "controlled" lands and administers legislation licensing land agents.

In carrying out these responsibilities, the department has two primary objectives:

- to ensure that Alberta's renewable resources are used and developed in a way that will provide maximum benefit to the public as a whole, both now and in the future;
- to protect the environment while maintaining resource productivity.

The department's annual budget exceeds $161 million and there are more than 1 700 permanent full-time Forestry, Lands and Wildlife employees serving the public at locations throughout the province.

A number of acts and regulations govern the orderly development and use of Alberta's renewable resources. This legislation, which is adminstered by the department, is listed at the end of this report (page 28).

To fulfill its mandate, the department is organized into six divisions: Alberta Forest Service, Public Lands, Fish and Wildlife, Resource Evaluation and Planning, Alberta Bureau of Surveying and Mapping and the Foreign Ownership of Land Administration.

NOTE: Departmental support services for Forestry, Lands and Wildlife during the year were provided by the Finance and Administration Section of Alberta Energy. For information concerning these services, please consult the Alberta Energy Annual Report 1985/86.

Alberta Forest Service

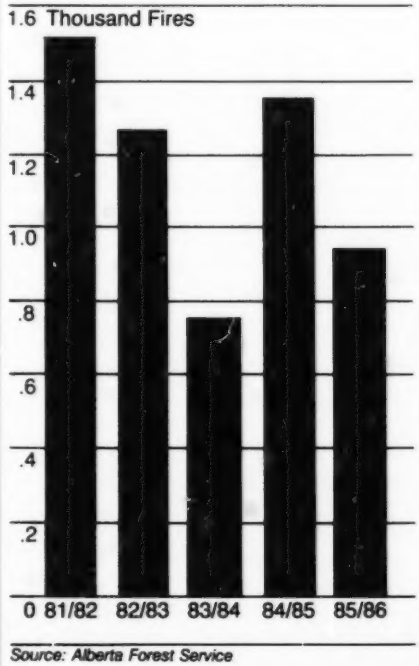
The objective of the Alberta Forest Service (AFS) is to manage Alberta's forest lands to ensure a perpetual supply of benefits and products while maintaining a high quality forest environment.

Forest lands cover 331 000 square kilometres, or 50 per cent of the province. Of this, 182 000 square kilometres are productive forest land and support 2.3 billion cubic metres of wood. An additional 20 000 square kilometres have the potential to produce forest products. The remaining areas of rock, muskeg and wetland are not considered capable of producing timber.

The spring of 1985 produced very high fire danger ratings and these led to an early use of seasonal fire suppression resources. However, the latter half of the season was cooler, with significant precipitation. As a result, fire incidence was only slightly above the long-term average.

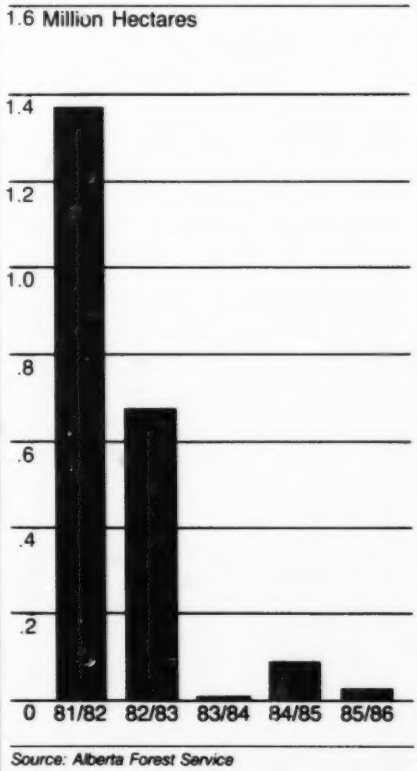
The presuppression preparedness system continued to be a factor in containing multi-fire incidence and reducing the potential for second period or campaign fires. During 1985 a total of 939 fires burned the forests on 12 919 hectares, down significantly from 1 370 fires and 80 731 hectares burned in 1984 (Figures 2 and 3.) Only three of these fires continued to spread

Figure 2 - Fire Incidence



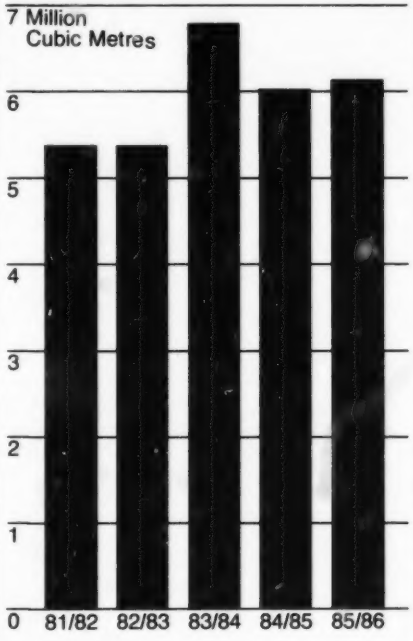
Source: Alberta Forest Service

Figure 3 - Area Burned



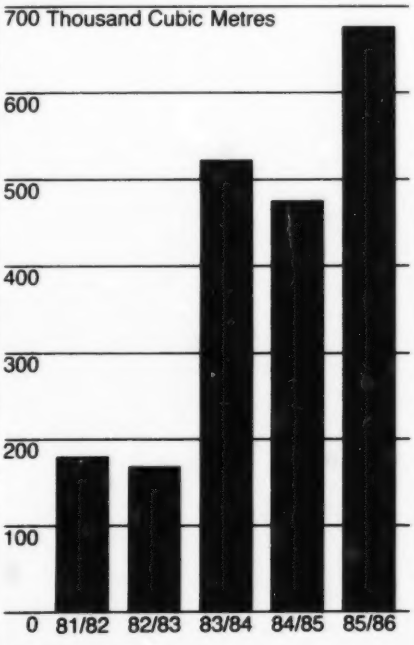
Source: Alberta Forest Service

Figure 4 - Coniferous Timber Harvest



Source: Alberta Forest Service

Figure 5 - Deciduous Timber Harvest



Source: Alberta Forest Service

after initial attack and became campaign fires. These three fires, located in the Peace River and Footner forests, accounted for 80 per cent of the total hectares burned.

The 1985 season had more high fire danger and man-up days than 1984. Fire dangers were extreme in many areas, particularly from May 15 to 25 and June 25 to July 12. Forest closures and low lightning incidence during these periods kept the number of fire starts low, avoiding some of the severe problems experienced in British Columbia. Lightning caused 56 per cent of all fires, a 10 per cent increase over the 10-year average.

The Automatic Lightning Detection System, supplemented by loaded aircraft patrols, showed its value. This technology has helped increase detection and initial attack success, especially during periods of critical hazard. The total cost of forest protection for 1985 was $38 million, with direct suppression costs of $9 million.

The AFS contributed to the Jiagedaqi model fire management project in the Chinese province of Heilongjiang. The Province of Ontario, under funding from the Canadian International Development Agency (CIDA) has subcontracted the fire detection component to the Province of Alberta. Three trainees from China received two months of hands-on experience in Alberta and have now returned to China to develop a detection system for their province. This project will be continued in 1986 with an exchange of personnel from both sides scheduled.

The use of fire as a resource management tool continues to grow. Five prescribed burns covering 259 hectares were conducted in 1985. Proposals for 1986 total 2 500 hectares.

The number of infested limber and lodgepole pines discovered and treated as part of the Eastern Slopes mountain pine beetle program was drastically reduced. This suggests that the control program has been successful and the outbreak could be coming to an end. Monitoring of this situation will continue. For the first time in the history of the province's insect and disease survey, jackpine budworms were found in Alberta. This insect is a fast developing defoliator and can quickly reach epidemic stage. The population has not yet established itself within the forested area of the province and its movement will be carefuly monitored.

The biomonitoring program was established in the area of the Lodgepole sour gas well blowout, to assess soil and vegetation damage resulting from the blowout and to document vegetative recovery in the area.

The division's Range Management Program allows ranchers to use Crown lands for livestock grazing. In 1985/86, 208 417 animal unit months (AUMs) of grazing were provided in the Rocky Mountain Forest Reserve and on 279 041 hectares in other parts of the Green Area. To maintain the current level of grazing, 2 811 hectares of rangeland were improved through the Range Improvement Program at a cost of $450 758.

The Alberta Forest Service managed and maintained 150 recreation areas and 22 group camps which provide 4 704 overnight camping units and 1 329 day-use units. An extensive system of formal and informal trails was maintained to ensure provision of recreational opportunities for hiking, cross-country skiing, snowmobiling and equestrian and off-highway vehicle use.

Five Forest Land Use Zones were established in the Bow/Crow, Rocky/Clearwater and Grand Prairie forests. These zones protect sensitive resources (e.g., wildlife, habitat, vegetation, soils and watershed) and permit control of conflicting recreational activities. The legislation establishing the zones contains sunset clauses which provide a mechanism for repealing or including changes to the legislation on a specific date.

Procedures for the predisturbance assessment of watershed condition were developed. These will provide a method of gathering critical information on Alberta's watersheds and ensure their protection.

On October 26, 1984, an agreement was signed between the federal and provincial governments on the development of Alberta's forest resources and forest industry. The Canada/Alberta Forest Resource Development Agreement (FRDA) has several key objectives: to ensure the security of timber supplies and industry viability, to promote the efficient utilization of forest resources, especially hardwood resources, and to increase economic diversity and employment opportunities in the forest sector.

During the year, the agreement provided core funding to the Alberta Research Council forest products group to carry out research and development

according to provincial priorities and assist industry with its problems. The program also provided funds on the basis of contracts to carry out research and development work in logging residue utilization for oriented strandboard, chemical utilization of aspen, use of Alberta woods for laminated beams, drying of aspen/poplar for furniture and evaluation of chemicals from steam exploded aspen. In addition, a co-operative forest management effort was launched on three peatland areas covering approximately 400 hectares. The objective of the program is to evaluate and develop environmentally sound, cost-effective technology for commercial tree production on unproductive wetlands.

Also, part of the FRDA was a survey to examine public attitudes towards various aspects of forests and the forestry industry. The survey, which was conducted in the province in early September, was designed to determine any significant differences in awareness and attitudes among urban, non-urban, forest area and fringe area respondents. In overview the results indicate general support for forestry in Alberta. The need for interventionist forest management is acknowledged, including the use of chemicals when professionally controlled. There is extensive use of Alberta's forest, most for recreational purposes.

Timber harvested from provincial Crown lands totalled 6 958 446 cubic metres, an increase of 5.5 per cent over 1984/85. The harvest is primarily used in the manufacture of pulp, lumber and panel products. Eighty-three per cent was sawlogs or peeler logs and 14 per cent was pulpwood.

The coniferous and deciduous timber harvests were 6 276 816 cubic metres and 681 630 cubic metres - 90.6 per cent and 9.8 per cent of the total harvest, respectively (Figures 4 and 5). The province's forests also provided 29 147 Christmas trees and 11 953 transplants for the public.

A total of 36 960 timber dispositions were issued, one per cent more than the 36 544 dispositions issued in 1984/85. Only 99 of these would be considered major dispositions, the remainder being Local Timber Permits or Forest Product Permits (Figure 6).

In 1985 Pelican Spruce Mills, Ltd. was awarded a Forest Management Agreement southwest of Drayton Valley. The agreement covers an area of 2 500 square kilometres and contains an annual allowable harvest of 172 000 cubic metres of hardwoods and 100 600 cubic metres of softwoods. This is the first Alberta agreement to utilize the combined hardwood and softwood resources. As part of the agreement an oriented strandboard plant, along with an associated sawmill, will be constructed at Drayton Valley. A permanent work force of approximately 150 people will be employed in the mill, with an additional 200 workers employed in wood harvesting and hauling operations.

Reforestation surveys were completed on 29 682 hectares of cutover land. This included 14 468 hectares of post-harvest surveys and 15 214 hectares of regeneration surveys. Seventy-seven per cent of the regeneration area surveyed met provincial stocking standards. A Juvenile Stand Survey Program was initiated on 255 cutblocks of 2 851 hectares. The objective of this is to describe the composition of our regenerated forest 10 years after establishment.

Silviculture treatments completed by the AFS included mechanical scarification of 7 393 hectares, seeding of 2 297 hectares, planting of 4 296 hectares (5 517 739 seedlings) and thinning of 803 hectares. Cone collection totalled 785 hectolitres of Douglas fir. The nursery processed 3 954 hectolitres of cones to produce 2 686 kilograms of tree seed. The total seed inventory decreased by 1 859 kilograms to 42 930 kilograms. A program to collect tree seed from superior stands is under development.

The Maintaining Our Forest Afforestation Program, funded through the Alberta Heritage Savings Trust Fund, continued in 1985/86. Activities for the year included stocking surveys (10 793 hectares), land clearing (1 292 hectares), mechanical scarification

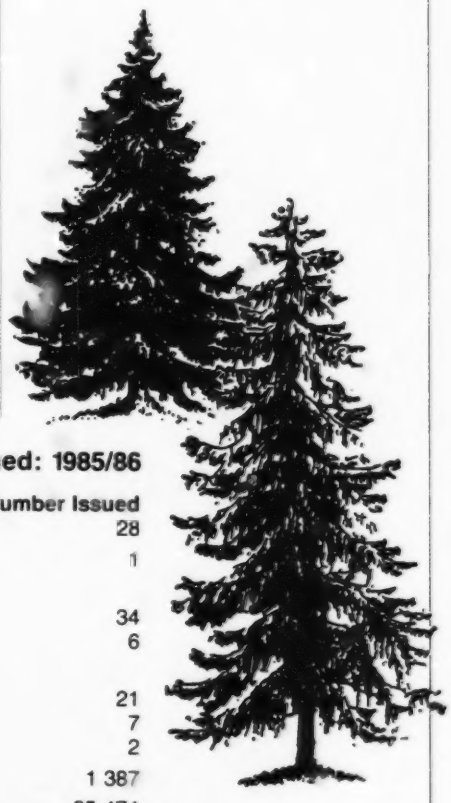
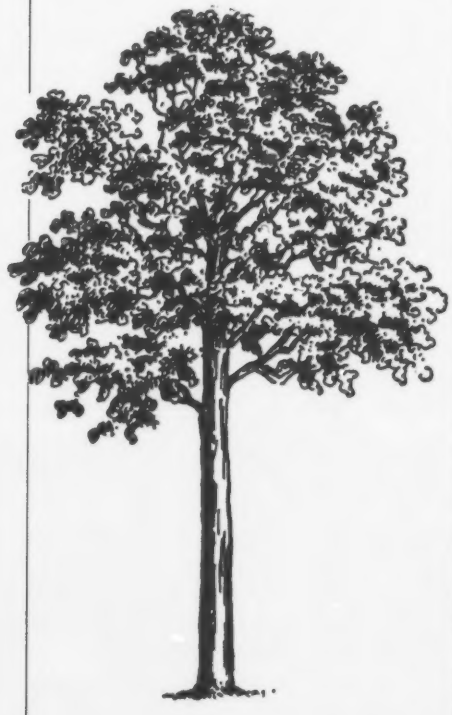


Figure 6 - Timber Dispositions Issued: 1985/86

Type	Number Issued
Coniferous timber quota	28
Deciduous timber allocations (DTA)	1
Licences:	
Coniferous quota	34
Deciduous, DTA	6
Commercial Timber Permits:	
Coniferous (green)	21
Coniferous (dead or damaged)	7
Deciduous (green)	2
Local timber permits	1 387
Forest Product Permits (Tree Tags)	35 474
Total timber dispositions issued	**36 960**

Source: Alberta Forest Service



(4 530 hectares), chemical site preparation for planting (542 hectares), and planting (11 852 hectares; 17 219 955 seedling trees).

A total of 30 operational reclamation projects were carried out in the Green Area. These included the reclamation of abandoned access roads, trails and seismic lines; abandoned mines, well sites, sawmill sites and abandoned camps and residential sites; sand and gravel pits; and unauthorized refuse dump and abandoned motor vehicle removals. Approximately 60 kilometres of access and 90 hectares of surface disturbances were affected. A second aerial fertilization trial of thinned lodgepole pine forest covering about 200 hectares was completed.

Reclamation trials established in the past on abandoned disturbances in the eastern slopes and in the oil sands area were maintained. The first comprehensive long-term report on reclamation studies with native grasses initiated since 1978 was written and is being distributed.

Container seedling production increased to over 14 million seedlings in 1985/86. Innovations included shipping one million container seedlings in boxes and the first production scale sowing of larger container seedlings. Both of these practices are expected to improve the quality of seedlings available for planting.

The field inventory of bareroot stock (including 1986 spring sowing) now stands at 21 988 000 seedlings. This total includes more than 50 000 transplanted Plug + 1 (trial production) containerized seedlings. They will be lifted in the fall of 1986. The combined total of container and bareroot seedlings shipped this past year was 29 248 025, which brings the total shipped to date for reforestation purposes to 146 701 235 seedlings.

A Siberian larch seed orchard was planted at Pine Ridge and planting stock production continued for three white spruce seed orchard developments. Technical plans for a lodgepole pine seed orchard were completed. This orchard is part of a joint government/industry tree improvement program. Thirteen new genetics research plantings were established and greenhouse seeding was completed for two additional field experiments. Research studies on flowering and seed production, pollen management, wood quality analysis of selected superior trees, and plant propagation were in production.

Additional forest research was carried out in reforestation, watershed, site classification, and tree growth and yield. Reforestation research looked at the best lifting time and storage limitations of bareroot seedlings, extension of planting season, identification of the best microsites for planting, innoculation of seedlings with beneficial fungi to enhance survival and growth, and studying aspen suckering. Watershed research was continued at the Tri-Creek Watershed in co-operation with other research agencies and the staff of Edson Forest. Co-operative work was maintained with the Resource Evaluation and Planning Division resulting in the completion of site classification for northwest Alberta. Emphasis was placed on the stand dynamics study concerning stand development after harvesting.

Sixteen research studies were contracted to the private sector and other publicly funded research agencies taking advantage of specialized equipment and staff that are not available within the division. A major study related to the design of peatland drainage was successfully completed and results were given to forest managers.

Nine studies were funded from the Forest Development Research Trust Fund. They covered a wide range of topics such as development of pheromones against mountain pine and spruce beetles, the effect of Armillaria root rot on young forest and regeneration of lichens following disturbance in common forest types.

The number of clubs, wardens and volunteer leaders involved in the Junior Forest Warden program continued to expand in 1985/86. Alberta has approximately 500 volunteer adult leaders who provide 2 000 youngsters (aged six to 16) with a variety of programs. These range from forest management techniques to activities designed to develop an appreciation for the responsible use of natural resources. The volunteer leaders worked at upgrading their skills, competencies and programs through attendance at approximately 50 AFS-sponsored workshops.

The Junior Forest Ranger work experience program provided meaningful summer employment in forestry conservation to more than 100 young Albertans in seven separate camps. More than 70 per cent of the students in the program have indicated a desire to pursue post-secondary training in a resource field.

Public Lands

The Public Lands Division is responsible for the administration of public lands as defined in the Public Lands Act.

A major function of the division is to determine the suitability of public lands for various purposes. Some are leased for grazing, cultivation, recreation, commercial or industrial uses. Suitable lands may be sold for farms, subdivisions, plant sites or other purposes. Grazing reserves are developed on some public lands for livestock grazing. Other lands are reserved for the use of other departments and agencies.

The total area of Alberta is 225 285 square miles (661 185 square kilometres) or some 163 million acres (66 million hectares). About 62 per cent is under provincial control and more than 60 per cent of all lands, largely the forested regions, is not settled. The status of lands in Alberta is outlined in Figure 7. A significant portion of Crown land in Alberta has been given a protected status for conservation, recreation, ecological and other purposes, as shown in Figure 8.

Of the public lands under disposition under Public Lands Division management (4.7 per cent of the province), 0.53 million acres (0.22 million hectares) are under disposition leading to title. About 7.18 million acres (2.91 million hectares) are under disposition not leading to title (lease, permit or licence) and include 5.7 million acres (2.30 million hectares) of grazing leases and permits. Statistics indicating the number of applications received, the number of dispositions issued and the number of all public land dispositions are presented in Figure 9.

A major responsibility of the division is to respond to applications for public land dispositions. In 1985/86, applications related to oil and gas activity increased 16 per cent over the last fiscal year. The most significant increase occurred in pipeline agreements (23 per cent), licences of occupation (16 per cent) and mineral surface leases (12 per cent). Although the increase in mineral surface lease applications was only 12 per cent, the division processed 2 953 mineral surface lease applications during this period. Oil sands exploration applications and coal exploration applications continued to decline, with 16 applications received in the past fiscal year. Surface materials lease applications and recreational lease applications increased slightly.

Interest in the seeding and harvesting of wild rice in Alberta's lakes continues to increase. A total of 336 lakes were approved for experimental planting. Although wild rice is not native in the lakes in this province, seeded wild rice stands have been successfully grown on some lakes for five years.

In the fall of 1985 the grazing lease conversion policy was implemented. Grazing leases can now convert up to six quarter sections to farm development sale or lease with or without option to purchase. Only lands that can be safely cultivated over the long term will be considered for sale or conversion following application by the lessee. The lands must not be subject to erosion or be required for watershed protection, key wildlife habitat, recreation, parks, subdivision, forestry purposes or access to other

Figure 7 - Status of Lands in Alberta: March 31, 1986

	Area in Square Kilometres	Area in Square Miles	Percentage of Alberta
Privately owned land	184 218	71 127	27.8
Public lands			
Under disposition to title	2 163	835	0.3
Under disposition not leading to title[a]	28 995	11 195	4.4
Special areas[a]	12 308	4 752	1.9
Provincial parks, wilderness areas	2 323	897	0.4
Willmore park, natural areas	4 771	1 842	0.7
Metis settlements	5 053	1 951	0.8
Indian reserves	6 566	2 535	1.0
Non-settled public lands			
Forested lands within the Green Area[b]	284 712	109 928	43.0
Forest management agreement areas and provisional reserve	50 038	19 320	7.6
Vacant public land (within White Area)[c]	16 907	6 528	2.6
Federally controlled lands (national parks, research stations, Department of National Defence, etc.)	63 131	24 375	9.5
Total Area of Alberta	**661 185**	**255 285**	**100.0**
Land	644 389	248 800	97.5
Water	16 796	6 485	2.5

a Includes some tax recovery lands.
b Green Area: Forested lands withdrawn from settlement, managed for forestry and other users.
c White Area: The settled area of the province, including the settled area of Peace River region. Public lands in this area are managed for multiple use, including agriculture, pursuant to the Public Lands Act and regulations.

Source: Public Lands Division

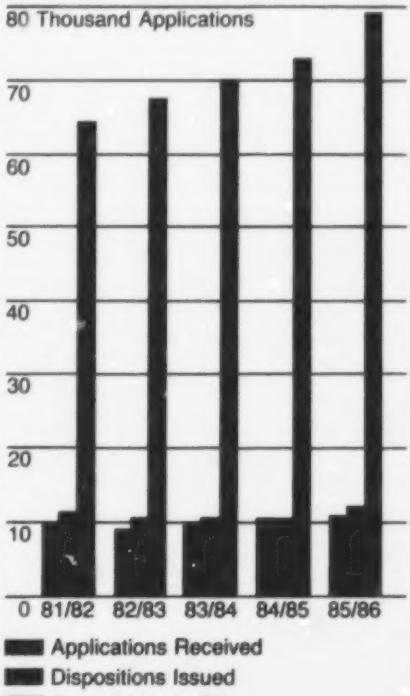
Figure 8 - Crown Lands with Protected Status in Alberta

Under Legislation	Area (km^2)	% of Alberta
National Parks	54 084	
Provincial Parks	1 251	
Natural Areas	174	
Forest Land Use Zones	5 646	
Provincial Recreation Areas	44	
Willmore Wilderness Park	4 597	
Wilderness Areas	1 010	
Bird and Wildlife Sanctuaries	694	
Forest Recreation Areas	1 214	
Total	**68 714**	**10.4**
Under Protective Reservations		
Ecological Reserves	597	
Natural Areas	765	
Recreation Areas and Proposed Provincial Parks	1 152	
Total	**2 514**	**0.4**
	71 228	**10.8**
Under Protective Zoning		
Eastern Slopes		
Prime Protection Zoning	12 708	
Critical Wildlife Zoning	5 940	
Within Integrated Resource Plans outside the Eastern Slopes	3 762	
Total	**22 410**	**3.4**

A total of 10.8% of Alberta is protected, with 10.4% of the province protected under legislation and 0.4% under protective reservation. In addition, a significant portion of the 3.4% of the province which is under protective zoning does not overlap with other protective designations and could be added to the total.

Source: Resource Evaluation and Planning Division

Figure 9 - Activity on Public Lands



A small portion of the increase in 1985/86 over 1984/85 for dispositions in effect is due to additional statistics available through a computized record system.

Source: Public Lands Division

public lands. The intent is to allow good arable land in the settled regions to be used for its highest agricultural potential.

To the end of the 1985/86 fiscal year, a total of 618 conversion applications covering approximately 235 000 acres was received. Of these, 412 were for farm development sale, 177 for farm development lease with option to purchase and 29 for farm development lease without option to purchase.

The number of forest grazing licence applications increased slightly in 1985/86 while the number of grazing permit applications declined somewhat. The number of active grazing leases and the area held under lease remained about the same at 5.3 million acres (2.2 million hectares).

The number of applications received for cropland increased because of the implementation of the grazing lease conversion policy. However, of the 618 applications, only five covering about 1 200 acres were approved during the fiscal year. The total acreage under farm development remained about the same. The number of cultivation permit applications decreased slightly, but the acreage under cultivation permits increased by 25 per cent.

The number and acreage of homestead sale dispositions continued to decrease because of the elimination of homestead sale provisions in the Public Lands Act in 1984.

Public Lands is also involved in the administration of several on-going programs. Under the government-funded Range Improvement Program, 134 applications were approved and funded for range improvement projects. Funding continued for 858 partially completed range improvement projects. Projects undertaken on grazing leases include clearing, piling, forage establishment, trail and crossfence construction and water storage projects. The amount expended on these projects was $3.7 million.

The Grazing Reserve Program provides summer pasture for the livestock of small-scale farmers and ranchers whose privately owned lands are thus freed for crop and hay production. The program is intended to help diversify and stabilize the agriculture industry. There are 32 grazing reserves covering 0.7 million acres (0.29 million hectares) in settled areas of the province. In 1985, 31 operational reserves accommodated

269 214 animal unit months of livestock grazing, equivalent to 74 800 mature head of livestock. A total of 1 593 patrons benefited from the program. Active development of grazing reserves continued during 1985/86 and included clearing, burning, breaking, seeding, aerial spraying, fertilizing, fencing and water development. These development activities involved contracts totalling $3.92 million, $2.70 million of which was funded by the Alberta Heritage Savings Trust Fund.

The Natural Areas Program provides public land in its natural state for recreation, education and conservation. Three proposed natural areas were advertised for public input in 1985/86. If input is favorable, these sites will be considered for establishment by order-in-council in 1986/87. A few additional proposed sites were added to existing inventory. Management planning is being done on several sites, generally with assistance from public interest groups. Consideration of public lands for the proposed ecological reserves program continued in co-operation with Recreation and Parks.

The operation of the reclamation program continued. In 1985/86, through funding from the Heritage Savings Trust Fund, five contracts for a total of $26 019 were awarded to reclaim abandoned gravel pits, to clean up debris and garbage dumps and to restore and protect the Kleskun Hills Natural Area. Eighteen other projects, for a total of $32 800, involving abandoned buildings, debris cleanup and erosion control were completed with financing provided by the divisional budget.

In 1985/86 contracts were issued to a private consulting firm to conduct a detailed arable land inventory of 75 040 acres (30 369 hectares) as part of the department's accelerated land sales initiative. Staff of the division conducted arable land inventories of an additional 36 000 acres (14 569 hectares).

Legal surveys were completed on 40 sections of public lands in the High Level Area for agricultural expansion. A subdivision survey at Red Earth created 24 lots to meet residential needs. These lots will be transferred to Municipal Affairs for disposition to the public. Several parcels were also surveyed west of Edmonton to facilitate the management of the Wagner Natural Area.

Fish and Wildlife

Alberta's fish and wildlife resources are managed by the Fish and Wildlife Division to provide maximum public benefit and to ensure that viable populations are maintained for future generations of Albertans.

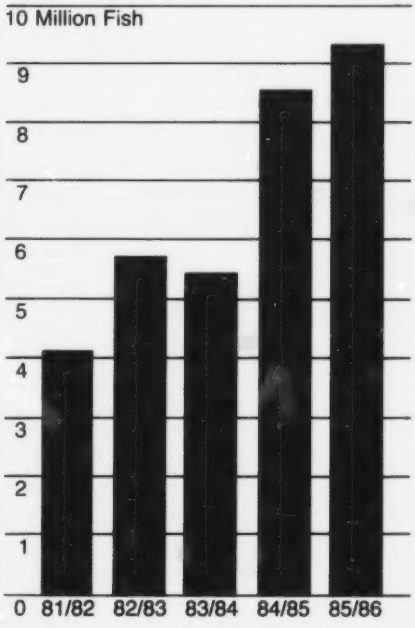
Draft regulations were prepared under the new Wildlife Act (Bill 84) and received a thorough review by the minister's Advisory Council in preparation for the pending 60-day public review.

Major progress was achieved internationally in waterfowl management with the development of the North American Waterfowl Management Plan. As well, a discussion paper on outfitting and guiding was circulated and received public review in preparation for the development of new policy in this area.

Significant levels of progress continued in habitat development and protection initiatives. A major redirection of staff into various habitat functions and the streamlining of procedures were instrumental in processing development project reviews and approvals. Close liaison with and support by community interest groups, such as Fish and Game clubs, enhanced the development and implementation of local habitat programs.

Understanding and co-operation were obtained from the Bow River and Eastern Irrigation districts in recognizing habitat needs for wildlife. A major land acquisition by the division in co-operation with the Alberta Fish and Game Association, Habitat Canada and Ducks Unlimited, resulted in the purchase of the 2 226-hectare Ward Ranch. This ranch, near Brooks, contains excellent habitat which will be developed to enhance wildlife and offer major benefits to the public and local residents. The Tyrrell-Rush lakes project in southern Alberta was completed under the Wetlands for Tomorrow Program supported by Ducks Unlimited, Alberta Environment and the Fish and Wildlife Division.

Figure 10 - Number of Fish Stocked



Source: Fish and Wildlife Division

Figure 11 - Species of Fish Stocked in 1985/86

Species	Number
Rainbow Trout	5 400 000
Walleye	2 300 000
Eastern Brook Trout	538 000
Brown Trout	486 000
Yellow Perch	328 530
Cutthroat	194 000
Lake Trout	117 500
Arctic Grayling	12 000
Golden Trout	4 000
Total	**9 380 000**

Source: Fish and Wildlife Division

Further progress continues with the Use Respect campaign, a community service program to reduce the incidence of trespass by recreationists on private and leased land. Under this program, access-trespass problems have declined and this has helped recreationists by opening up more access opportunities. The majority of landholders are receptive to access when permission is requested before entering their lands. The Outdoor Observer program introduced a 24-hour "hotline" with a 1-800-642-3800 number to report fish and wildlife violations. A mandatory First Time Hunter Test has been developed for implementation under the new wildlife regulations.

Close ties continued with the Alberta Fish and Game Association and local naturalist groups. Community leadership was provided by Fish and Wildlife staff working in co-operation with numerous private organizations and corporations on environment and resource conservation matters.

In managing the province's aquatic resources, the division's goal is to maintain or enhance fish populations for the benefit and enjoyment of Albertans. One important aspect of this program is the annual fish-stocking of Alberta lakes, streams and other waterbodies. During the year more than 9.3 million fish were reared and stocked in 308 waterbodies (Figures 10 and 11). This not only provided angling opportunities in areas with limited natural fisheries but also ensured a variety of species available to anglers.

Walleye - A total of 12.5 million walleye eggs were collected in 1985 to produce 3.5 million fry. Four hundred thousand fry were returned to the lakes where the eggs were taken and Lake Wabamun received 1.9 million. The remaining 1.2 million fry were put into rearing ponds and produced 3 800 fingerlings which were stocked in Lac La Biche. The factors affecting fingerling production were reviewed and a number of changes will be made to the rearing system to improve survival. Artificial walleye rearing is still to some degree in the developmental stages in North America. Alberta Fish and Wildlife is now considered a leader in this area of fish culture.

Trout - There were 6.8 million trout stocked in 1985, a 31 per cent increase over the 4.9 million stocked the previous year. The species were rainbow trout, cutthroat trout, and arctic grayling. There was a major increase in the number of brown trout, from 155 000 in 1984 to 486 000 in 1985.

The Alberta Fish and Game Association's trout-rearing project involved seven local clubs, used 26 ponds, and produced 2 565 trout approximately 15 cm in length. These were placed in existing trout-producing lakes.

Yellow Perch - A total of 328 530 small yellow perch were transferred, from well-populated lakes to start new populations in 10 other lakes and expand fishing opportunities for this species.

The number of fishing licences issued over the last five years is illustrated in Figure 12.

Construction progressed well on the Cold Lake Fish Hatchery, which will be phased into production in 1986. A contract to operate the Sundance Trout Rearing Station near Lake Wabamun was awarded to a private operator to rear 175 000 yearling rainbow trout.

Many Alberta lakes are managed to accommodate both a sport fishery and a commercial fishery. The main target species in the commercial fishery is whitefish. Northern pike, tullibee, lake trout, perch and walleye are also taken for commercial purposes but in considerably lesser amounts than whitefish.

Game fish species are protected in commercially fished lakes by establishing low production quotas, regulating the mesh size of gill nets, using depth limits and closing areas of water frequented by game fish during the commercial fishing operation.

During 1985/86, 2 313 commercial fishing licences were issued - 765 zone commercial licences and 1 548 fishermen's licences. This was an increase of two licences over the previous year. These numbers are expected to remain reasonably stable owing to the freeze on entry into the commercial fishing industry. The freeze on licensing is an interim measure pending the establishment of a new commercial fishing licence system for Alberta, which will be in effect April 1, 1987.

The transferable licence policy for commercial fisheries received final approval in 1985. When the new licencing system is introduced it will be possible to reduce the numbers of commercial fishermen on a voluntary basis, to ensure adequate income

opportunities for the participants and to maintain a more evenly distributed flow of fish to the market. The reform of the present licensing system is regarded as a major step toward maintaining a viable commercial fishery.

From the 92 lakes open to commercial fishing during 1985/86, the catch was 3.2 million kilograms of fish, with a value to fishermen of $2.8 million (Figure 13). This was an increase of approximately 0.7 million kilograms of fish over the previous year's catch. The total landed value was $800 000 more than in 1984/85. Increased production and stable international market prices for export grade whitefish were experienced throughout the year.

During the 1985/86 fishing season, 15 fish packing and processing establishment licences were issued. Six of these establishments also held licences from the Freshwater Fish Marketing Corporation which permitted them to market fish within the province. These dealers moved 108 000 kilograms of fish to markets within Alberta.

The main thrust in wildlife in 1985/86 was in international waterfowl planning, species management plans (for elk, moose, sheep, caribou, antelope, deer and pheasants), updating the nuisance wildlife policy, developing and executing a telephone hunter questionnaire, preparation of a draft fur management plan, a threatened species management paper and a non-game strategy paper.

Changes in the 1985/86 hunting season were made following extensive public discussions. The simplified regulations will help maintain a sound resources management system while providing a more understandable format.

Big game and bird game licence sales for the year are shown in Figure 14.

Studies continued on wildlife, particularly bighorn sheep, in the Mount Allan area, site of the 1988 Winter Olympics. Radio collars were placed on numerous sheep to determine their seasonal distribution and key use areas for lambing grounds and nursing areas. The information obtained from these studies is being used in the design of the Olympic facilities, to accommodate both the development's and wildlife interests in a compatible manner.

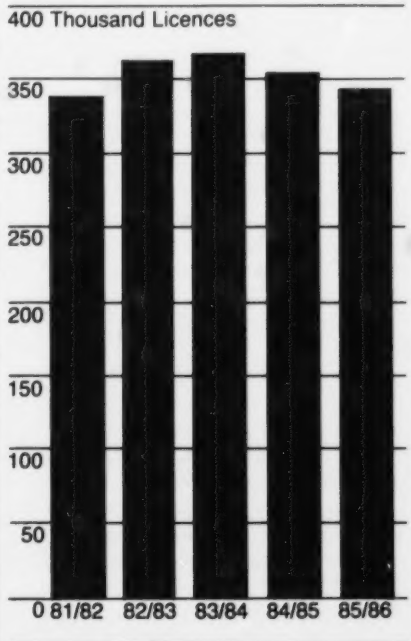
Waterfowl numbers did not respond favorably to normal runoff conditions, even though May pond numbers were the highest in five years. Numbers of breeding ducks returning were 33 per cent below the long-term average for 1955 to 1984. However, the division is hopeful that favorable habitat conditions will have a positive effect on breeding waterfowl production.

Alberta joined with other provinces and American states which make up the four U.S. flyways to implement hunting regulations designed to reduce the mallard harvest by 25 per cent. The 1985 fall flight was 50 per cent below the flights in 1970-79 and similar to the drought years of 1980-84, resulting in a continued downward trend in hunting opportunity and harvest.

The North American Waterfowl Management Plan received public review and was endorsed by both American and Canadian governments, with the official signing taking place in May, 1986.

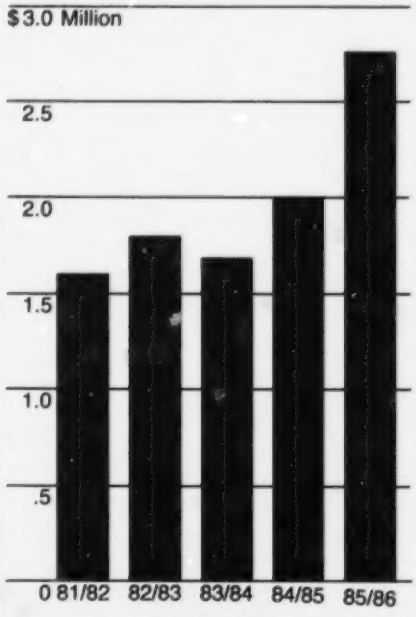
The Brooks Wildlife Centre hatched 131 000 pheasant chicks for an 11 per cent increase over 1984. Approximately 99 500 were released to the wild, with a distribution of 17 755 birds as day olds, (7 780 going to 4-H members, 8 575 to private raisers and 1 400 to Fish and Game Clubs). Another 14 320 six-week-old birds were retained at the Brooks Wildlife Centre to provide breeding stock for 1986.

Figure 12 - Fishing and Angling Licence Sales



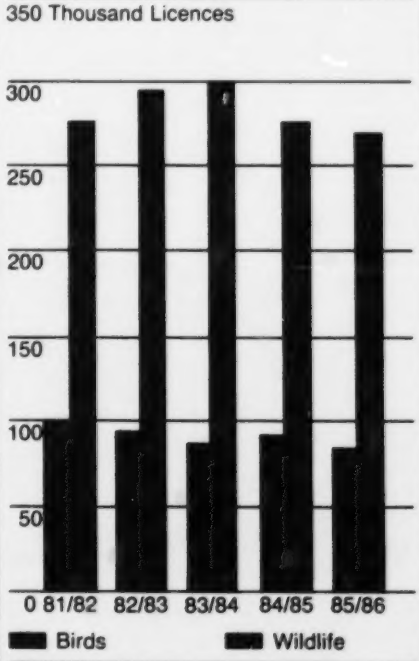
Source: Fish and Wildlife Division

Figure 13 - Commercial Fish Production



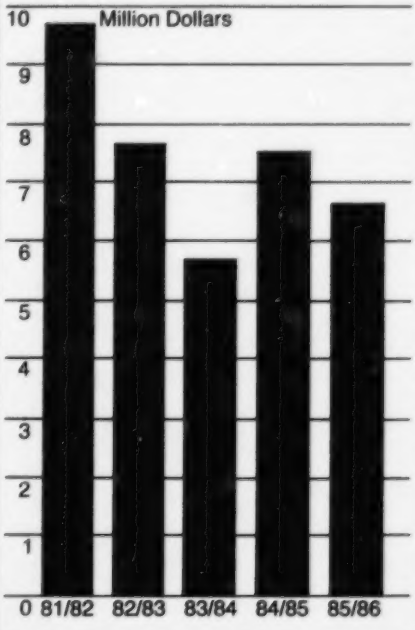
Source: Fish and Wildlife Division

Figure 14 - Wildlife and Bird Game Licence Sales



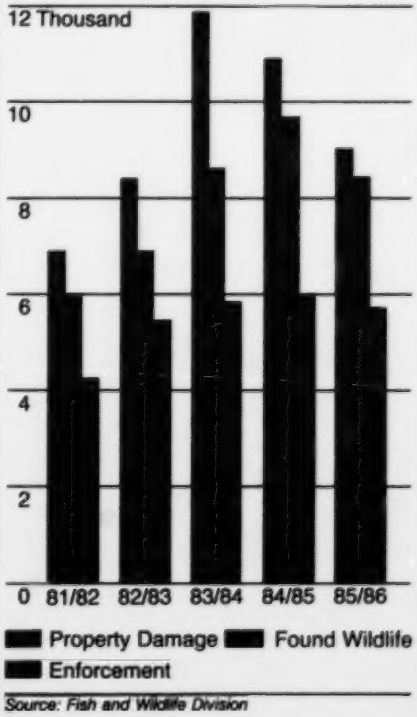
Source: Fish and Wildlife Division

Figure 15 - Wild Fur Production



Source: Fish and Wildlife Division

Figure 16 - Occurrences



Source: Fish and Wildlife Division

The centre received 3 650 visitors in 1985. Of the visitors, 79 per cent were Albertans, 11 per cent other Canadians, five per cent Americans and the remaining five per cent other countries.

Overall, upland game bird numbers were up from 1984, with hunting opportunities similar to other years.

The continued loss of native habitat associated with irrigation upgrading, coupled with the winter of 1984/85, reduced the numbers of wild spring breeding pheasants in southern Alberta. These conditions reduced the number of birds available to the hunters.

Major activities of the carnivore management/nuisance wildlife programs were to continue evaluation of wolf predation of big game, to review and update policies and programs relating to wildlife damage, and to monitor rabies in skunks and bats.

Wild fur production increased in 1984/85 with a general increase in monetary returns to Alberta trappers. However, mink, muskrat, coyote, lynx and fisher populations remain low, so the total wild fur production remained well below the long-term peak of 15.6 million in 1979/80 (Figure 15).

Favorable fur prices and production are expected to continue throughout 1986-87. Improved water conditions will enhance the beaver, muskrat and mink populations. Fisher, marten and lynx pelts remained in extremely high demand, with record prices being received.

Twenty-four trapper education courses were held for 328 participants during 1985/86. Advance courses were upgraded and a new Western Canadian Trapper Instructor Course was conducted for the first time, as there is growing demand among Western Canada fur managers to develop and promote a uniform program which stresses humane trapping, fur handling and fur management concepts. Five workshops stressing wolf control were also conducted.

Fish and Wildlife remained involved in the Fur Institute of Canada's humane trap testing program at the Alberta Environmental Centre at Vegreville, where testing of killing traps for mink, marten and raccoon is underway. In conjunction with the Vegreville testing program, the Fish and Wildlife Division is conducting a two-year field testing program on a series of leg snares and modified leghold traps for coyotes and wolves.

Studies to enhance the endangered peregrine falcon focused on the indigenous population in northern Alberta and on two re-introduction locations in central Alberta. With assistance and co-operation from Alberta Government Telephones, a public awareness program was carried out in Calgary and Edmonton.

A non-game wildlife program plan is being developed, along with a management policy on threatened wildlife. The purposes of the management policy are to:

- adapt a system to identify threatened wildlife;
- rank species into categories which reflect the degree of threat;
- recommend and develop management programs for theatened wildlife.

A telephone survey of resident big game and bird game hunters was conducted at the close of the 1985 hunting season. The survey was organized by the Fish and Wildlife Division, with most of the calls being made by members of 96 co-operating Fish and Game clubs across the province. Approximately 44 000 questionnaires were completed. The information collected, which is essential for management of game species, dealt with numbers of hunters, animals harvested, hunter success and hunter effort. This survey will continue annually.

Development of detailed management plans continues for elk, bighorn sheep, moose, caribou, mule deer, antelope, waterfowl and pheasants.

In habitat, construction was completed on the Tyrrell-Rush lakes project, part of the Wetlands for Tomorrow Program. This major project, which involved co-operation from Ducks Unlimited and Alberta Environment, provides an important waterfowl production base for southern Alberta. Similarly, the acquisition of the Ward Ranch near Brooks will serve as a vital link to the restoration of wildlife habitat and an excellent example of various government and non-government organizations working in harmony for the benefit of wildlife and the various user publics.

Several co-operative habitat development projects were undertaken with various private organizations, including the Alberta Fish and Game Association and Trout Unlimited, the oil and gas industry, other government agencies, and community clubs.

Habitat protection efforts were focused primarily on land-use planning initiatives undertaken with other government departments and the public, development of common standards and guidelines for habitat protection, and input on industrial developments.

Fish and Wildlife officers continued to provide a high level of public service in the administration of resource legislation, effective response to public inquiries, nuisance wildlife occurrences, and public education during 1985/86.

There was a decrease of 14 per cent in the number of occurrences and an increase of six per cent in the number of prosecutions handled over the previous year.

The three main types of occurrences in 1984/85 are shown in Figure 16.

A new Fish and Wildlife district office will open during 1986/87 to serve the Red Earth area.

The division continued to promote public awareness policies and programs, with special emphasis on conservation and hunter education initiatives.

Activities in 1985/86 included regulation summaries, public presentations, brochure and display development, and acknowledgement of numerous telephone and written inquiries. Community service programs were conducted in close liaison with the Alberta Fish and Game Association, school groups, Alberta Forest Service, 4-H clubs and the RCMP.

Project WILD — an educational program dealing with wildlife — and the Conservation Hunter Education Program were expanded. About 25 000 students were involved in Project WILD, while 12 500 students participated in the Hunter Education courses. Efforts continued to expand these programs through increased volunteer private sector involvement, particularly the Alberta Fish and Game Association.

The Use Respect campaign was expanded with assistance from 4-H clubs, which distributed information packages — signs, literature and questionnaires — to farmers and ranchers in the Stettler and Lethbridge area. Upwards of 4 000 landholders participated in the survey in which over 95 per cent agreed to permit access if the public asked for permission. This was considered a pilot initiative and, in view of its success, the participation of 4-H clubs is expected to increase in 1986-87 to move the program throughout Alberta.

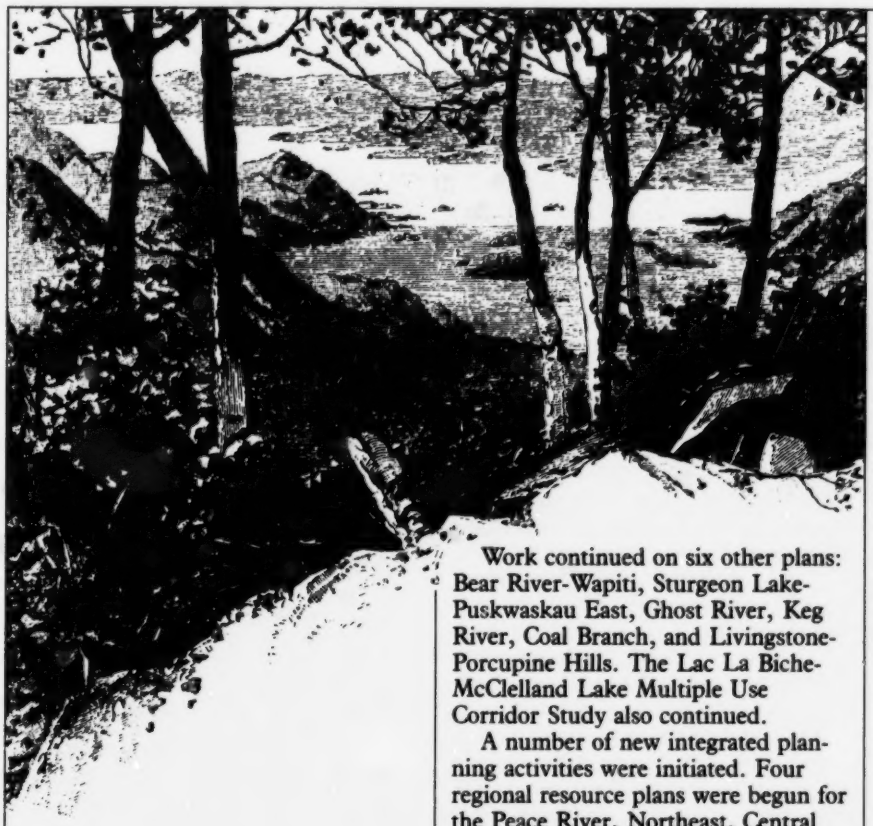
The annual Bighorn Awards banquet recognized individuals, associations and corporations making significant contributions to fish and wildlife resource conservation in Alberta. In 1985, the recipients were Lloyd Shea, Garnet Anthony, John Overguard, Vic Scheuerman, Shell Canada Resources Limited, Ducks Unlimited Canada and the Stony Plain Fish and Game Association. This event was honored by the presence of the Hon. Don Getty, Premier of Alberta.

Resource Evaluation and Planning

Resource Evaluation and Planning Division (REAP) provides an integrated resource policy and planning service to the government. It is also responsible for aerial photography, resource mapping and resource information services.

One of the division's major responsibilities is to co-ordinate the preparation of integrated resource plans. Under the government's integrated resource management approach, planning the use of the province's public lands and resources is carried out in a comprehensive, co-ordinated way. The goal is to ensure a mix of resource uses that will provide maximum benefits to Albertans.

During the year, seven integrated resource plans were approved by cabinet for implementation: Jean D'Or Prairie, Castle River, Big Bend, Lakeland, Frost Hills, Kananaskis Country, and Nordegg-Red Deer River. The plans cover a total area of 26 590 square kilometres (10 262 square miles). Two additional plans are ready for cabinet committee review and approval: Brazeau-Pembina and Rocky-North Saskatchewan.



Work continued on six other plans: Bear River-Wapiti, Sturgeon Lake-Puskwaskau East, Ghost River, Keg River, Coal Branch, and Livingstone-Porcupine Hills. The Lac La Biche-McClelland Lake Multiple Use Corridor Study also continued.

A number of new integrated planning activities were initiated. Four regional resource plans were begun for the Peace River, Northeast, Central and Southern regions. In conjunction with *A Policy for Resource Management of the Eastern Slopes, Revised 1984*, these plans will complete regional-level integrated resource planning for the province.

A new sub-regional plan was initiated for the Cold Lake area, and the approved Poll Haven and Canmore Corridor plans were reopened for revisions. The Fisheries Access Study for the Municipality of Crowsnest and the Bow River Economic Study broadened the range of planning activities.

Public involvement is an important component of integrated resource plans. The public involvement program provides the opportunity for public input and comment on plans throughout the planning process. In addition to information, on-going contact with the public and the involvement of the Alberta Integrated Planning Advisory Committee, major public involvement programs were held for six integrated resource plans. Strategies to inform and to involve the public in a meaningful way are developed and followed for each planning effort.

Economic information is increasingly used in analysis and decision-making related to integrated resource planning. Economic assessments of financial, income and employment effects are incorporated into integrated resource plans. A two-day symposium was held on the Role of Economics in Integrated Resource Management, with presentations from resource economists and participation from a wide spectrum of planning participants.

Work was begun on preparing provincial resource goals for use in regional integrated resource planning. Plan implementation and the incorporation of social assessment information into the planning program were investigated. Information analysis on the application of electronic data management in the planning program was maintained.

The division also provided review and referral services and co-ordinated departmental comments on a wide range of issues, including preliminary disclosures, referrals from other agencies and land-use plans.

Efforts to develop effective use of computer technology to capture and display natural resource data continued throughout the year. Several specific pilot projects using geographic information system software were begun on behalf of the resource management divisions of the department. These activities will assist in defining long-term data processing requirements for the geographic information system. Work on a 1:20 000 Digital Base Map component of the Natural Resources Information System continued to be given high priority. All future land-related information will be referenced to this base once it is completed. In 1985/86 the first 202 of 3 030 base maps were completed, with an additional 438 maps in various stages of preparation. The project continues to be a major stimulus to the private sector, with four Alberta companies having successfully established themselves in digital mapping. The audit of this work required close communication among staff, contractors and internal project teams to process the massive amount of digital data in a relatively short time.

Provision of graphic services continues to be in high demand by department clientele, with 329 user requests requiring 3 276 man days of in-house support.

Pending completion of the 1:20 000 Digital Base Map, the division is continuing to update the 1:50 000 Provincial Resources Base Map in order to provide department users with information on current condi-

tions. In 1985/86, an additional 99 maps in high priority areas were completed as part of this update.

An additional 16 834 square kilometres (6 499 square miles) of stand-by-stand forest inventory has now been completed as an approved extension to the previously completed Phase 3 Forest Inventory Program.

Three Alberta contractors were used to complete 273 aerial photo projects in various locations. The successful completion of these projects produced 243 515 square kilometres (94 021 square miles) of new photography for provincial management and resource development users. Photographic mosaic maps totalling 12 955 square kilometres (5 002 square miles) were produced for many clients. Orthophoto base mapping was produced for approximately 14 300 square kilometres (5 521 square miles) in the Bow-Crow Forest.

Large-scale topographic mapping was completed for 19 projects in various parts of the province. Two Alberta mapping contractors were used to complete most of this work.

The annual Natural Resources Information Directory, which serves as an index to natural resources and land-related information for Alberta, was published and distributed to a large number of government and private users. In addition, services were provided to ease access to and distribution of natural resource information. Attention was directed to improving access to existing data base, client services and data handling.

Several resource inventory projects were undertaken in support of Alberta's integrated resource planning process: Kimiwan-Winagami, Peace Point, Grande Prairie County West, Coal Branch, Berland and Pinehurst Lake. Data were gathered on 7 500 square kilometres (2 895 square miles) of the Footner Lake Forest to provide forest inventory interpretation at a scale of 1:15 000. Forest site work continued with zonation in the northwest part of the province, and the study of stand dynamics following fire and logging continued in the Slave Lake Forest. Terrain/soil studies were completed on 3 000 square kilometres (1 158 square miles). A provincial sand dune location map was prepared. Development work began for remote sensing applications to resource inventories.

Through a continuing contract with the Alberta Research Council (ARC) three enhanced reconnaissance inventories were conducted to identify aggregate deposits in the Bitscho Lake-Steen River, Lesser Slave Lake and Fort McMurray areas of northern Alberta. Additional detailed investigations were conducted to determine the quantity and quality of remaining aggregate reserves in the Fort McMurray area.

Evaluation reports on the coal resources within the Ardley and Horseshoe Canyon formations and the Belly River Group were also completed by the ARC under the long-term contract from the department. Information on the coal resources within these coal zones to a depth of 400 metres (1 312 feet) is now available in several reports with accompanying computer-based maps. A new coal geology program was implemented to complement the reconnaissance-level coal inventory program. Work is underway to link the present coal inventory data base with the proposed Natural Resource Information System.

Several reports were prepared under contract by the ARC on a variety of industrial and metallic minerals found within the province. To date, eight mineral data reports have been completed to complement the mineral inventory catalogue being prepared. These reports include a preliminary summary of collected information about gold, limestone/dolestone, sodium sulfate, lead/zinc, silica sand, gypsum, phosphate and dimension stone. Preliminary work is underway to develop an automated mineral inventory data file within the province. The department is working closely with the Geological Survey of ARC and the private sector to define requirements.

In response to the need for explicit and reproducible natural resource evaluations, work was undertaken involving forestry, agriculture, wildlife, fisheries, recreation and mineral resources. This was accomplished by working closely with the resource management agencies on projects in order to develop methods and procedures to facilitate resource management decision-making.

The climate inventory program maintained three climate networks and completed a province-wide revision of agrometeorological assessment for use in the province's new agriculture rating system.

Alberta Bureau of Surveying and Mapping

Alberta Bureau of Surveying and Mapping co-ordinates all provincial surveying and mapping activities. It develops and maintains standards and ensures comprehensive coverage of the province. The Bureau also distributes maps and aerial photographs for the province, and federal and municipal governments and the private sector. It also chairs the Interdepartmental Committee on Surveying and Mapping. The Surveys Act, Land Surveyors Act and Boundary Surveys Act are administered by the Bureau.

The Bureau provides a geographical positioning framework for the province suitable for use by government and the private sector in the integration of position-dependent land-related information. It provides a standardized mapping system for the province which is suitable as a base for the display of position-dependent land-related information. The Bureau also co-ordinates the development of a network of land-related information systems and fosters the sharing of information between the public and private sectors.

Major achievements in 1985/86 were:

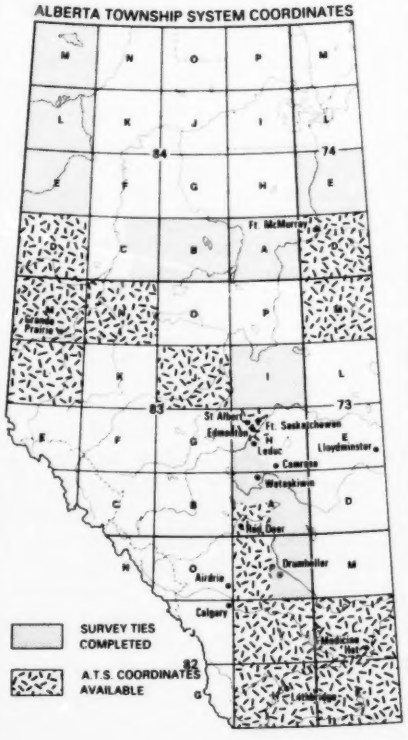
- Completed three urban municipalities and added 628 new survey control markers under the municipal survey control program.
- Contracted to the private sector all phases of the field operations for the Town of Three Hills project, under the municipal survey control program.
- Completed a rewrite of the Surveys Act for presentation to the Legislative Assembly in the fall of 1986.
- In support of the 1:20 000 Base Mapping Project, contracted with private surveying firms to provide 537 field survey ties to township corners.
- Began the Maps Alberta program with funding by the Department of Energy and Natural Resources Revolving Fund.

The Land Related Information Services (LRIS) completed its third full year of operation. A highlight was the joint meeting of the LRIS Steering Committee and the Ministerial Advisory Committee on Surveying, Mapping and LRIS. The meeting addressed the Alberta Land Titles Automation (ALTA) Project, and the support of these two committees was instrumental in the reinstatement of this project. As a result, all nine programs/component parts of the primary system are under development.

Another major program is the planning and creation of a provincial survey control network. A total of 628 new survey control markers were added to the high density municipal survey control, and 152 new markers were added to framework survey control. Three new projects - Westlock, Swan Hills, and Three Hills - were completed. Municipal survey control networks are now complete for one rural and 60 urban municipalities.

Figure 17 - Status of Framework Control Program

Figure 18 - ATS Co-ordinates Computed in 1985/86



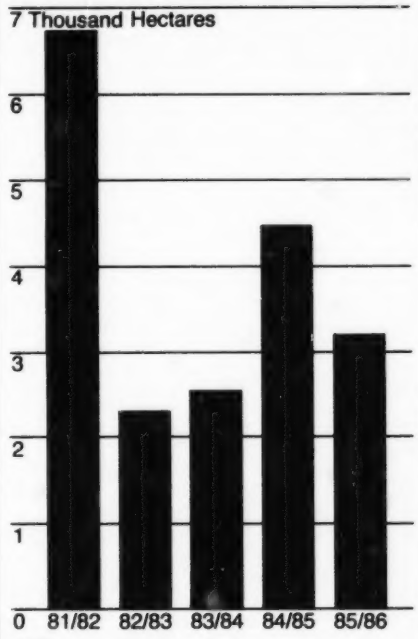
The status of the framework survey control program is shown in Figure 17. As well, considerable progress has been made preparing the final scheduling of the NAD83 readjustment.

Programs to preserve and maintain the land survey system in Alberta are an important function of the Bureau. To support the 1:20 000 Base Mapping Project, private survey firms were contracted to obtain 537 field survey ties from the Survey Control System to township corners. New Alberta Township system co-ordinates were also computed (Figure 18). Maintenance of the Land Survey Data Base continued with new co-ordinates computed for 225, and revised co-ordinates computed for 1 863, 1:1 000 map sheets. In addition, 4 040 survey plans were examined before submission to the Land Titles Office for registration.

The Bureau devoted significant effort to the planning and development of the 1:20 000 mapping data base for provincial mapping, in conjunction with the Resource Evaluation and Planning Division. The Provincial Mapping Section along with the Geodigital Systems Section has implemented the Stuttgart Contour Program (SCOP) from the University of Stuttgart to prepare a variable grid digital elevation model of the province using the 1:20 000 project data. At the end of this fiscal year 235 digital files and 202 scribed map sheets had been accepted from REAP. For the first time, certain cartographic services were provided through the department's revolving fund. Four major maps were produced and 200 map sheets were prepared for office of the province's Chief Electoral Officer using contracts with the private sector.

The Bureau's distribution function was enhanced by its new revolving fund operation. Funding was provided to create the Maps Alberta program, and to support the Technical and Cartographic (Thematic) sections. These three units provide their services, on a cost-recovery basis, to the provincial government and the private sector.

Figure 19 - Controlled Land Acquired by Foreigners



NOTE:
"Controlled land" is defined in the Foreign Ownership of Land Regulations as any land outside the boundaries of a city, town, village or summer village. It does not include Crown land or minerals. "Foreigners" include ineligible persons and foreign-controlled corporations as defined in the regulations.

Source: Foreign Ownership of Land Administration

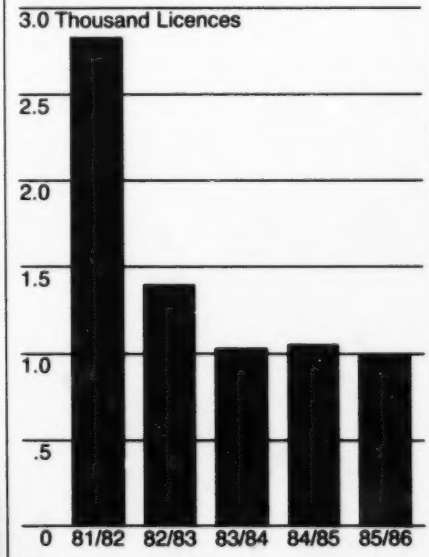
Foreign Ownership of Land Administration

Foreign Ownership of Land Administration enforces the Foreign Ownership of Land Regulations, which control and restrict the acquisition by foreigners of privately owned agricultural and recreational land in the province. Another major responsibility is the administration of the Land Agents Licensing Act and Regulations, under which all land agents in the province are licensed and regulated. Land agents acquire from landowners the surface interests in land required for mining operations, oil and gas well sites, power transmission lines, pipelines and related purposes.

Figure 19 shows the amount of controlled land acquired by foreigners under various exemptions or exclusions from the Foreign Ownership of Land Regulations during the past five fiscal years.

Figure 20 shows the number of active land agents licences for the past five fiscal years.

Figure 20 - Active Land Agent Licences



NOTE:
Effective April 21, 1982, all new applicants for a licence are first issued an interim licence which they hold for a 12-month period under the supervision of a licensed land agent. After a satisfactory supervision period and upon successful completion of the land agent examination, a land agent licence is issued.

Source: Foreign Ownership of Land Administration

Communications

The Commmunications unit, serving both Energy and Forestry, Lands and Wildlife, provides a broad range of public relations services to the departments, including communications planning, public affairs activities, brochures and other printed materials, advertising, displays and media relations as well as editorial and publication services.

In consultation with management, communications plans were developed for several divisions of Forestry, Lands and Wildlife. Examples include the Outdoor Observer program and the new Wildlife Act and regulations for the Fish and Wildlife Division, as well as the grazing lease conversion program for Public Lands.

One important initiative which will lead to development of division-wide communications planning was the presentation in January 1986 of the results of a six-month communications effectiveness study for the Fish and Wildlife Division. The report contained 38 recommendations for increasing the effectiveness of Fish and Wildlife communications activity.

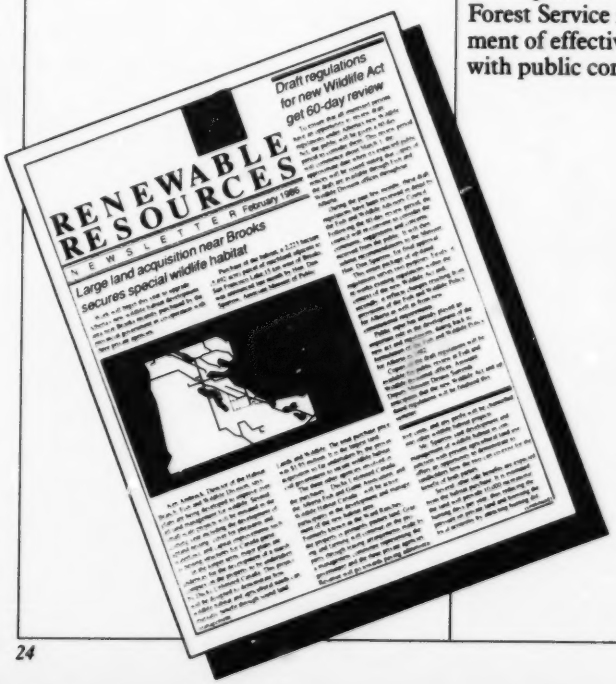
Further development took place on plans designed to identify, analyse and recommend ways to handle public issues affecting the department. Bi-weekly meetings were held with the deputy minister and all six division heads to review public issues and developments. Consultation with the Forest Service resulted in the development of effective methods of dealing with public concern over using herbicides in reforestation programs. On another issue, the proposed sale of public lands under grazing lease, an information campaign was initiated to reach both those directly affected by the policy and the general public.

Major advertising programs assisted various divisions in carrying out their public service programs. A $220 000 campaign for the Forest Service was aimed at reducing the occurrence of forest fires caused by recreationists or by farmers and ranchers burning debris. Other examples included print and television advertising on hunting and fishing seasons, the announcement of conservation restrictions in five new forest land use zones, and the improved availability of federal and provincial maps through 85 retailers in 44 Alberta centres. Called Maps Alberta, the latter activity reflected the use of a marketing approach to communications planning which was a "first" for the department.

A four-page monthly publication, the *Renewable Resources Newsletter*, was launched in January 1986 to improve communication with various groups, organizations and individuals with a special interest in Alberta's renewable resources. Ten times a year the newsletter provides a quick overview of the policies, programs and activities of the department. Approximately 6 000 copies are distributed. The first three issues included articles on habitat development, Maps Alberta, the 5 500-acre Ward Ranch acquisition, commercial fishing, grazing reserve expansion, forest land use zoning, and the progress of integrated resource planning in the province.

One important department-wide publication developed and produced for the first time during the year was the 250-page Guide to Programs listing 330 programs and services offered by the department.

The department's Information Centre in Edmonton, now in its third year of operation, continues to be a valuable channel of communications between the department and its many publics. By contacting the centre, individuals and businesses can obtain printed information, ask questions, or buy permits and licences. Use of this facility increased markedly in 1985/86 .


RENEWABLE RESOURCES
NEWSLETTER February 1986
Large land acquisition near Brooks secures special wildlife habitat
Draft regulations for new Wildlife Act get 60-day review

Personnel Services

Personnel Services Division is responsible for providing services in the areas of recruitment, classification, wage and salary administration, employee relations, staff and organizational development, and occupational health and safety.

During the year the division provided services for 1 732 permanent positions, 125 project positions and approximately 2 500 wage employees. Although there was a slight decrease in employment levels - 38 permanent - human resource activities remained at a high level,with emphasis being placed on organization reviews. These reviews throughout the department created significant increases in classification activities, organizational structuring, workload effectiveness studies and general organizational intervention. Recruitment activity remained fairly constant but the time required to recruit staff increased significantly due to the high numbers of qualified applicants.

The wage payroll system was converted to the Alberta Financial Information System (AFIS) in October, 1985. Additional programs administered by the division include the Priority Employment Program, the Summer Temporary Employment Program, and the Employment Skills Program. A work experience program, conducted in co-operation with the Edmonton school system, provided 20 students with work experience.

In 1985/86 emphasis was placed on the development of a Human Resource Planning System for the department. A Human Resource Advisory Planning Committee (HRAC) was formed, composed of division heads and chaired by the Associate Deputy Minister, Finance and Administration. This committee is responsible for advising on planning and developing human resource policies and priorities to meet divisional goals and requirements.

In training and development, attention was focused on reviewing the needs in these areas and on establishing a planned approach to the training and development process, including developing and implementing a departmental training model to identify and link organizational and individual needs.

A skills-related modular training program, Managing Human Resources, was developed and implemented for all supervisors. The pilot program involved middle and senior managers who were subsequently trained as instructors.

A plan for an Executive Development Program was established by a committee of senior executives. The plan reflects an approach which will result in development of a program designed to meet the specific needs of executives as well as the organization.

An organizational survey completed during the year involved interviewing a cross section of department managers and executives about the organization and other issues. The data collected were invaluable in developing a manpower planning strategy.

Another initiative introduced was the Succession Planning Program. A model was established and presented to senior executives. The model and process will be used on a pilot basis in 1986/87.

A five per cent reduction was reported in the number of lost time accidents, but there was a slight increase in the number of lost time and days.

The Forest Technology School continued to provide educational services in support of departmental activities. Slightly longer courses resulted in a six per cent increase in the overall use of the facility. Twenty-one hundred persons participated in various training activities. Fire control training retained its prominent role, with particular emphasis being given to mountain fire behavior.

The Forest Technology Program, offered in conjunction with the Northern Alberta Institute of Technology, experienced some recovery in enrolment but a marked decline in numbers is again forecast. The curriculum underwent some adjustments to reflect changing technologies and employee requirements.

Financial Statements

ALBERTA FORESTRY, LANDS AND WILDLIFE
Statement of Revenue
For the Year Ended March 31, 1986
(Unaudited)

	1985/86 ($000)	1984/85 ($000) (Restated)
Taxes, Licences and Fees		
Fish and Wildlife Royalty and Taxes	$ 32	$ 159
Fishing Licences	997	1 674
Game Licences	3 965	4 539
Landman Licensing Fees	33	30
Forest Technology School Fees	433	358
Timber Dues and Fees	17 002	18 353
	22 462	25 113
Leases and Permits		
Cultivation Leases	965	1 017
Grazing Leases and Hay Permits	4 743	4 897
Public Land Leases and Permits	1 134	1 344
Right to Access	3 714	4 590
Sand and Gravel	1 375	1 175
	11 931	13 023
Provincial/Federal Government Agreements	2 424	960
From Revenue Producing Assets	1 353	1 263
Sale of Assets		
Homestead and Land Sales	3 114	4 555
Miscellaneous Revenue		
Survey, Maps, Plans and Aerial Photography	(293)	655
Other	42	18
	(251)	673
Total Revenue	**$ 41 033**	**$ 45 587**

Prepared by Financial Accounting Branch,
Finance and General Services Division, October 20, 1986.

ALBERTA FORESTRY, LANDS AND WILDLIFE
Statement of Expenditures
For the Year Ended March 31, 1986
(Unaudited)

	1985/86 ($000)	1984/85 ($000) (Restated)
Financial, Administration and Policy and Advisory Services Divisions		
Finance and General Services	$ 7 301	$ 6 909
Automated Information Systems	3 037	4 236
Personnel Services	1 968	1 801
Internal Audit	350	323
Policy Analysis and Planning	618	861
	13 274	14 130
Other Divisions		
Resource Evaluation and Planning	11 492	12 126
Alberta Forest Service	79 505	74 469
Public Lands	18 956	17 587
Fish and Wildlife	25 349	24 300
Foreign Ownership of Land Administration	342	312
Alberta Bureau of Surveying and Mapping	10 111	9 845
	145 755	138 639
Executive Offices	484	418
Special Warrants and Special Programs		
Firefighting Special Warrant	14 147	18 206
Wildlife Crop Damage	1 525	—
Forest Products Special Warrant	109	—
Emergency Feeding Program	—	333
Buck for Wildlife Program	—	5 383
	15 781	23 922
Total Expenditures	**175 294**	**177 109**
Less Expenditure Recoveries	1 418	973
Net Expenditures	**$ 173 876**	**$ 176 136**

Prepared by Financial Accounting Branch,
Finance and General Services Division, October 20, 1986

Notes to the Financial Statements
For the Year Ended March 31, 1986

Note 1 - Comparative Figures

The 1984/85 figures have been restated where necessary to conform to the 1985/86 presentation.

Note 2 - Departmental Change of Name

The Department of Energy and Natural Resources was split into the Departments of Energy and Forestry, Lands and Wildlife on February 6, 1986.

Legislation Administered by Forestry, Lands and Wildlife

- Agricultural and Recreational Land Ownership Act
- Boundary Surveys Act
- Crown Cultivation Leases Act
- Department of Forestry, Lands and Wildlife Act
- Fish Marketing Act
- Forest Development Research Trust Fund Act
- Forest and Prairie Protection Act
- Forest Reserves Act
- Forests Act
- Homestead Lease Loan Act
- Land Agents Licensing Act
- Land Surface Conservation and Reclamation Act
- Land Surveyors Act
- Law of Property Act
- Public Lands Act
- Surveys Act
- Wilderness Areas, Ecological Reserves and Natural Areas Act
- Wildlife Act
- Willmore Wilderness Park Act